BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: Improvements to roads and drain at Jakkur and Jakkur Extension Surrounding area in ward No.08 Jakkur

MEASUREMENT SHEET

FIRST AND FINAL BILL

Chainage From	Chainage To	Description of Item	Unit	No	Length (m)	Breadth B1	Breadth B2	Breadth Avg B	Depth (m)	Quantity	Rate in RS.	Amount in RS.	Remarks
Item no.01		Removing and refixing stone slabs of drains and pointing in CM (1:3) (Data Rate)											
			Sqm										
		Vide Total executed Quantity from premeasuremet Page no. 1								174.72			
										Total Executed Quantity	**174.72**		
										Tender Quantity	**174.83**		
										Now To Be Paid Quantity	**174.72**	**121.00**	**21141.12**
Item No. 02		Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work.											
			Cum										
		Vide Total executed Quantity from premeasuremet Page no. 2								37.39			
										Total Executed Quantity	**37.39**		
										Tender Quantity	**37.46**		
										Now To Be Paid Quantity	**37.39**	**204.60**	**7649.99**
Item no.03		Providing granite slabs of selected quality roughly dressed havinf a size of 7.5cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete.											
Measurements Taken On :													
		Govt School Road LHS											
0	3.1		Sqm	1	3.10	1.35	1.35	1.35		4.19			
12.2	18.2		Sqm	1	6.00	1.35	1.35	1.35		8.10			
27.6	34.6		Sqm	1	7.00	1.35	1.35	1.35		9.45			
43.7	47.6		Sqm	1	3.90	1.35	1.35	1.35		5.27			
58.6	61		Sqm	1	2.40	1.35	1.35	1.35		3.24			
74	77		Sqm	1	3.00	1.35	1.35	1.35		4.05			
		MCECHS layout Cross Road											
0	3.7		Sqm	1	3.70	1.35	1.35	1.35		5.00			
14	17.2		Sqm	1	3.20	1.35	1.35	1.35		4.32			
28.9	32.4		Sqm	1	3.50	1.35	1.35	1.35		4.73			
43	48		Sqm	1	5.00	1.35	1.35	1.35		6.75			
58	62.6		Sqm	1	4.60	1.35	1.35	1.35		6.21			
73.3	78		Sqm	1	4.70	1.35	1.35	1.35		6.35			
88	93		Sqm	1	5.00	1.35	1.35	1.35		6.75			
										Total Executed Quantity	**74.41**		
										Tender Quantity	**74.93**		
										Now To Be Paid Quantity	**74.41**	**742.00**	**55212.22**
Item no.04		Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils upto 300 mm depth.											
			Cum										
		Vide Total executed Quantity from premeasuremet Page no. 3								395.91			
										Total Executed Quantity	**395.91**		
										Tender Quantity	**394.13**		
										Now To Be Paid Quantity	**395.91**		
										Quantity Limited To	**394.13**	**71.50**	**28180.30**

Contractor

25/3/22
Assistant Engineer
ಬಿ.ಬಿ.ಎಂ.ಪ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾ

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MEASUREMENT SHEET
FIRST AND FINAL BILL

Chainage From	Chainage To	Description of Item	Unit	No	Length (m)	Breadth B1	Breadth B2	Breadth Avg B	Depth (m)	Quantity	Rate in RS.	Amount in RS.	Remarks
Item no.05		Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material by Mechanical Means using Hydraulic excavator with in all lifts and lead MORTH Specification											
			Sqm										
		Vide Total executed Quantity from premeasuremet Page no. 4								862.13			
		Total Executed Quantity								**862.13**			
		Tender Quantity								**837.00**			
		Now To Be Paid Quantity								**862.13**			
		Quantity Limited To								**837.00**	**4.40**	**3682.80**	
Item no.06		Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density											
			Cum										
		Vide Total executed Quantity from premeasuremet Page no. 5								232.05			
		Total Executed Quantity								**232.05**			
		Tender Quantity								**232.19**			
		Now To Be Paid Quantity								**232.05**	**2233.40**	**518260.47**	
Item no.07		Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification											
			Sqm										
		Vide Total executed Quantity from premeasuremet Page no. 6								1008.85			
		Total Executed Quantity								**1008.85**			
		Tender Quantity								**1009.50**			
		Now To Be Paid Quantity								**1008.85**	**46.20**	**46608.87**	
Item no.08		Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification											
			Cum										
		Vide Total executed Quantity from premeasuremet Page no. 7								50.46			
		Total Executed Quantity								**50.46**			
		Tender Quantity								**50.48**			
		Now To Be Paid Quantity								**50.46**	**10052.90**	**507269.33**	
Item no.09		Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification											
			Sqm										
		Vide Total executed Quantity from premeasuremet Page no. 8								1964.98			
		Total Executed Quantity								**1964.98**			
		Tender Quantity								**1965.50**			
		Now To Be Paid Quantity								**1964.98**	**15.40**	**30260.69**	
Item no.10		Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade,level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification											
Measurements Taken On :													
		Jakkuru											
		Govt School Beside Road											
0	30		Cum	1	30.00	5.80	5.40	5.60	0.04	6.72			C&FI
30	60		Cum	1	30.00	5.40	5.10	5.25	0.04	6.30			
60	90		Cum	1	30.00	5.10	5.30	5.20	0.04	6.24			
90	104.8		Cum	1	14.80	5.30	8.10	6.70	0.04	3.97			

23.23

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬೆಂಗಳೂರು-26

Contractor

ಸಹಾಯಕ ಅಭಿಯಂತರರು
Assistant Engineer
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
Assistant Executive Engineer
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

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MEASUREMENT SHEET
FIRST AND FINAL BILL

Chainage From	Chainage To	Description of Item	Unit	No	Length (m)	Breadth B1	Breadth B2	Breadth Avg B	Depth (m)	Quantity	Rate in RS.	Amount in RS.	Remarks
		Govt School Road											
0	7.5		Cum	1	7.50	5.00	5.00	5.00	0.04	1.50			
7.5	37.5		Cum	1	30.00	6.30	6.50	6.40	0.04	7.68			
37.5	67.5		Cum	1	30.00	6.50	5.80	6.15	0.04	7.38			
67.5	97.5		Cum	1	30.00	5.80	6.30	6.05	0.04	7.26			
97.5	127.5		Cum	1	30.00	6.30	6.20	6.25	0.04	7.50			
127.5	157.5		Cum	1	30.00	6.20	4.70	5.45	0.04	6.54			
157.5	187.5		Cum	1	30.00	4.70	5.30	5.00	0.04	6.00			
187.5	217.5		Cum	1	30.00	5.95	5.00	5.48	0.04	6.58			
217.5	239.5		Cum	1	22.00	5.00	4.70	4.85	0.04	4.27			
			Cum	1	7.60	2.20	2.20	2.20	0.04	0.67			
										Total Executed Quantity	78.61		
										Tender Quantity	78.62		
										Now To Be Paid Quantity	78.61	11672.10	917543.78

Item no.11	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification
	Item is not Operated
Item no.12	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately) Mix 1:5:10 Using 40 mm nominal size graded crushed coarse aggregates

	Cum												
Vide Total executed Quantity from premeasuremet Page no. 9										181.07			
										Total Executed Quantity	181.07		
										Tender Quantity	177.23		
										Now To Be Paid Quantity	181.07		
										Quantity Limited To	177.23	4344.90	770046.63

Item no.13	Providing and constructing un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Clause 1501.2.2 M30 (Grade), coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including construction joints, , primer, sealant , curing of concrete slabs for 14- days, and water finishing to lines and grade as per drawing and technical specification clause 1501 with all lead, lifts, loading & unloading charges, cost and conveyance of all materials, labour, equipments etc., complete MORTH Specification No.1501 . as per the directions of the Engineer-in-charge of the work.
Measurements Taken On :	

		Jakkuru Under Pass Road											
0	15		Cum	1	15.00	6.80	9.70	8.25	0.15	18.56			
15	30		Cum	1	15.00	9.70	9.30	9.50	0.15	21.38			
30	45		Cum	1	15.00	9.30	8.90	9.10	0.15	20.48			
45	53.1		Cum	1	8.10	8.90	11.70	10.30	0.15	12.51			
53.1	63.7		Cum	1	10.60	8.20	8.20	8.20	0.15	13.04			
		Jakkuru Smasana											
			Cum	1	8.10	9.15	9.15	9.15	0.15	11.12			
			Cum	1	11.70	9.00	9.00	9.00	0.15	15.80			
			Cum	1	8.20	10.40	10.40	10.40	0.15	12.79			
			Cum	1	4.00	3.40	3.40	3.40	0.15	2.04			
											130.72		

Contractor

ಸಹಾಯಕ ಅಧಿಯಂತರರು
Assistant Engineer
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
Assistant Executive Engineer
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-26

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MEASUREMENT SHEET
FIRST AND FINAL BILL

Chainage From	Chainage To	Description of Item	Unit	No	Length (m)	Breadth B1	Breadth B2	Breadth Avg B	Depth (m)	Quantity	Rate in RS.	Amount in RS.	Remarks
		Srirampura											
		Govt School opp Cross Road											
0	6.1		Cum	1	6.10	10.50	10.50	10.50	0.15	9.61			
0	15		Cum	1	15.00	5.80	5.10	5.45	0.15	12.26			
15	30		Cum	1	15.00	5.10	4.50	4.80	0.15	10.80			
30	45		Cum	1	15.00	4.50	4.60	4.55	0.15	10.24			
45	57.8		Cum	1	12.80	4.60	4.70	4.65	0.15	8.93			
57.8	64		Cum	1	6.20	3.00	2.30	2.65	0.15	2.46			
		Deduction											
		Column	Cum	1	1.20	1.20	1.20	1.20	0.15	-0.22			
		water tank	Cum	-1	2.20	2.20	2.20	2.20	0.15	-0.73			
										Total Executed Quantity	181.07		
										Tender Quantity	177.23		
										Now To Be Paid Quantity	181.07		
										Quantity Limited To	177.23	6223.20	1102937.74

Item no.14 Cutting transverse contraction joints 3 to 4 mm wide and depth 60mm in concrete slab using concrete cutting machine with diamond studded saw within 48 hours of casting of bay / slab etc. complete including subsequent widening of the groove 8 to 10 mm. wide at top having depth of 15 mm. as directed by Engineer incharge. MORTH Specification

Measurements Taken On :

		Jakkuru											
		Under Pass Road											
			m	16	8.25					132.00			
		Jakkuru Smasana											
			m	3	8.10					24.30			
			m	3	9.00					27.00			
			m	3	10.40					31.20			
			m	1	3.40					3.40			
		Srirampura											
		Govt School opp Cross Road											
			m	2	10.50					21.00			
			m	15	4.50					67.50			
										Total Executed Quantity	306.40		
										Tender Quantity	285.00		
										Now To Be Paid Quantity	306.40		
										Quantity Limited To	285.00	77.00	21945.00

Item no.15 Providing to contraction joints polysuphide sealent (Pouring grade) confirming to BS : 5212 - 1989 into sawed groove widened at top for sealent reservoir of specified size and shape as per detailed drawing including fixing Polyethylene foam backer rod of required diameter (approx. 25% larger than the initial 3 mm.to 4 mm. joint) overlaid with bond breaking tape as per detailed drawing. Item includes cleaning the joints with water jet / air compressor and allowing joint to become thoroughly dry before sealent is applied and applying primer. (A) Contraction and longitudinal joints (15 mm. deep x 8mm.wide). MORTH Specification

		Qty vide from item no 14	m							306.40			
										Total Executed Quantity	306.40		
										Tender Quantity	285.00		
										Now To Be Paid Quantity	306.40		
										Quantity Limited To	285.00	181.50	51727.50

Contractor

Assistant Engineer

Assistant Executive Engineer

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MEASUREMENT SHEET
FIRST AND FINAL BILL

Chainage From	Chainage To	Description of Item	Unit	No	Length (m)	Breadth B1	Breadth B2	Breadth Avg B	Depth (m)	Quantity	Rate in RS.	Amount in RS.	Remarks
Item no.16		Loading and Unloading of Stone Boulder/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 5.5 m3) and as per the direction of Engineer in charge of the work.											
			Cum										
		Vide Total executed Quantity from premeasuremet Page no. 10								433.30			
									Total Executed Quantity	**433.30**			
									Tender Quantity	**431.59**			
									Now To Be Paid Quantity	**433.30**			
									Quantity Limited To	**431.59**	**129.80**	**56020.38**	
Item no.17		Cost of Haulage Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km and as per the direction of Engineer in charge of the work.											
			t.km										
		Vide Total executed Quantity from premeasuremet Page no. 11								554.62			
									Total Executed Quantity	**554.62**			
									Tender Quantity	**470.33**			
									Now To Be Paid Quantity	**554.62**			
									Quantity Limited To	**470.33**	**105.60**	**49666.85**	
											Sub Total	**4188153.67**	
											Add 18% Gst	**753867.66**	
											Total Amount	**4942021.33**	

Round off: 4188000.00
753840.00
4941840.00

Contractor

ಸಹಾಯಕ ಅಭಿಯಂತರರು
Assistant Engineer
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿ
Assistant Executive Engine
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ

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